

PATENT CLAIMS

1. A multistage planetary gear incorporated in a gear housing and comprising an outer ring, planet wheels and a sun shaft, characterized in that a clutch (8) is mounted between the driving part (7) of the gear and the outer ring (6), which clutch (8), in the engaged state, transfers the driving movement to a toothed rim (6) provided on the planet shaft (4), while, in the disengaged state, it transfers the movement directly to the outer ring (16).
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2. A planetary gear according to claim 1, characterized in that the clutch (8) is of the electromagnetic type which may be remote-controlled (10).
- 15 3. A planetary gear according to claim 1, characterized in that the tooth engagement between the clutch part and the planet shaft (4) comprises an internal toothed on the clutch part and an external toothed (6) on the planet shaft (4).
- 20 4. A planetary gear according to claim 1, characterized in that the clutch (8) is a centrifugal clutch comprising clutch elements (13) which, in radially extending tracks (14) in the drive plate (7), are capable of coupling the drive movement with the outer ring (16) at a high speed and of decoupling at a lower speed and thereby of transferring the movement via the tooth engagement (6).
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5. A planetary gear according to claim 4, characterized in that the tracks (14) are evenly distributed with an equidistant mutual spacing on the drive plate (7).
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6. A planetary gear according to claims 4 and 5, characterized in

that the individual clutch elements (13) are provided with a transverse recess in which a tensile spring (15) extends to pull the elements (13) toward the axis of rotation.

5 7. A planetary gear according to claim 1, characterized in that there are two sets of planet wheels, a primary set (26) and a secondary set (18), and wherein the primary set (26), via a brake (8, 15), may either be held relative to the gear housing (20) or be caused to rotate freely with the ring gear (1).

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15 8. A planetary gear according to claim 7, characterized in that the holding of the primary planet set (26) to the gear housing (20) transfers the movement, with an opposite direction of rotation, to the planet shaft (18) of the secondary set via the primary sun shaft (17) to a resulting high speed of rotation of the secondary sun shaft (19), the output shaft.

20 9. A planetary gear according to claim 1, characterized in that the planet wheels (3) have two or more ring gears, which each are connected with the gear housing via a brake (8, 21, 22), said brakes (21, 22) being capable of optionally braking for each ring gear (6.1, 6.2) and thereby selecting the speed of rotation of the sun shaft (2).

25 10. A planetary gear according to claim 9, characterized in that a one-way bearing (24) is mounted between the sun shaft (2) and the ring gears (6.1, 6.2) such that the gearing is 1:1 when the brake (8, 21, 22) is disengaged.